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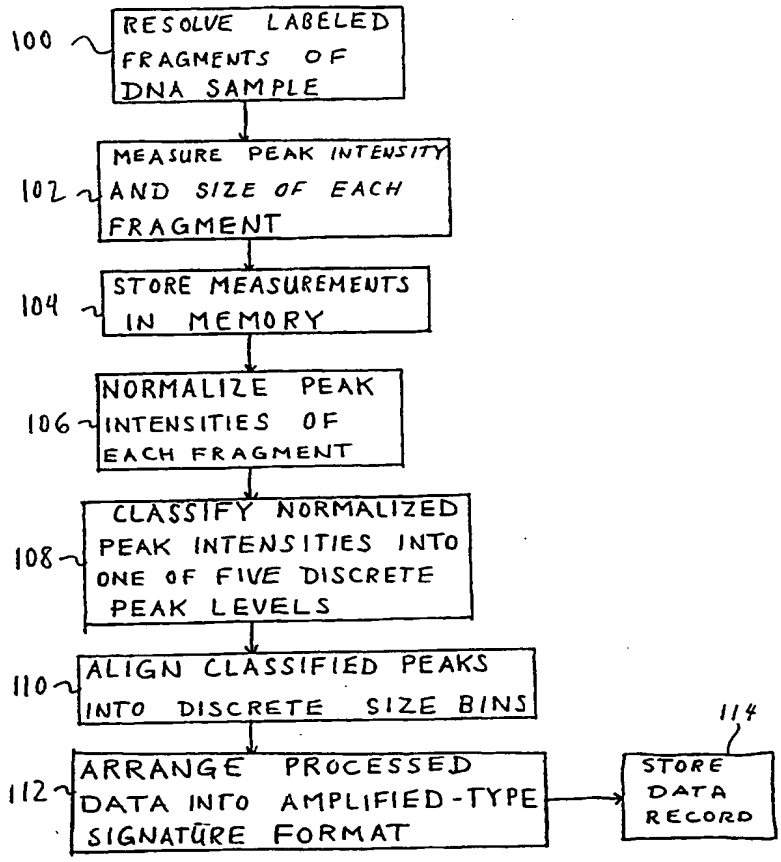
(54) Title: DNA MARKER PROFILE DATA ANALYSIS



(57) Abstract: A method for converting raw DNA marker profile data into an easily understood, standardized format in which the location and relative intensity of every marker is sufficiently represented. Raw DNA marker profile data is analyzed to classify peak intensities into discrete intensity levels, and a binning algorithm is used to align the sizes or positions of sequence fragments into discrete integer sizes. A reward-penalty system is used to score comparisons of DNA fingerprint records.